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(54) **FAT-LINE TOWED-ARRAY FORCE MEASUREMENT APPARATUS**

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(52) **U.S. Cl.** **73/862.393**; 367/20
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(57) **ABSTRACT**

An apparatus for measuring tensile and bending forces applied to a fat-line towed-array. Tension sensors are configured within a modified fat-line towed-array bulkhead to measure axial tension applied to the front of the fat-line towed-array, while bending sensors mounted further downstream along the fat-line canister interior walls, measure the bending load. The sensor outputs are encoded and digitized before transmitted through a tow line for further data conditioning and processing. The tension and bending sensor data provide information to evaluate the force exerted on the towed-array, allowing a measure of the deployment capability. Measurements taken at various fluid flow rates provide data regarding deployment effectiveness.

13 Claims, 3 Drawing Sheets